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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,818	01/18/2006	Isao Sogo	2005_1938A	7412

513 7590 01/08/2008

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EXAMINER	
SESE, JASON A	
ART UNIT	PAPER NUMBER
4174	

MAIL DATE	DELIVERY MODE
01/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,818	SOGO ET AL.	
	Examiner	Art Unit	
	Jason A. Sese	4174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *27 February 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Art Unit: 4174

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 15 recites the limitation, "...wherein the organic polymer constituting the protective film..." There is insufficient antecedent basis for this limitation in the claim, because claim 1 does not mention that the protective film is comprised of an organic polymer.

4. Claim 16 recites the limitation "... wherein the ultraviolet absorber..." There is insufficient antecedent basis for this limitation in the claim, because claim 1 does not mention that the protective film contains an ultraviolet absorber.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-13 and 17-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsunaga et al. (JP 2001-323149).

7. **Regarding claims 1-13 and 17-30**, the applicant claims a direct backlight type liquid crystal device comprising: a backlight source, a light diffusion sheet which may have a protective film on a surface thereof which faces the backlight source or on both surfaces thereof as desired, a light ray adjusting film, and a liquid crystal panel, wherein the light diffusion sheet is formed from a composition comprising: (A) 80 to 99.995 wt% of aromatic polycarbonate resin (component A), and (B) 0.005 to 20 wt% of polymeric fine particles (component B) having an average particle diameter of 0.01 to 50 μm, and (C) 0.001 to 5 parts by weight of at least one heat stabilizer (component C) selected from the group consisting of a phosphate compound (component C-1), a phosphite compound (component C-2) and a phosphonite compound (component C-3), (D) 0 to 2 parts by weight of ultraviolet absorber (component D), and (E) 0.0001 to 3 parts by weight of fluorescent whitening agent (component E), based on 100 parts by weight of the total of the components A and B.

8. Mitsunaga et al. disclose in paragraph [0011], a light diffusible polycarbonate resin composition comprising:

(A) 80-99.995 wt. % of aromatic polycarbonate resin,

(B) 0.005-20 wt. % fine polymer particles,

(C) 0.0001-0.05 parts wt. of phosphorus compound,

(D) 0.001-1.0 pts. wt. of trialkylphosphate (preferably trimethyl phosphate [0062]),

(E) 0.001-1.0 pts. wt. pentaerithritol diphosphite compound, (preferably distearyl pentaerythritol diphosphite)[0064], and

(G) 0-0.5 pts. wt. fluorescent whitening agent, such as benzoxazole or coumarin [0067].

The mean particle diameter disclosed by Mitsunaga et al. is in the range from 0.01 to 50 μm, and more preferably 0.1 to 8 μm [0047], and that the difference in refractive index between the particles and polycarbonate resin is in the range from 0.02 to 0.2. The particles are made from a polymerization of a non-cross-linking monomer and a cross-linking monomer. Acrylic monomers and a silicone system are mentioned [0044].

Mitsunaga et al. also disclose that an ultraviolet ray absorbent may be added [0068], and would comprise a benzophenone system [0072]. Absent a showing of criticality with respect to an amount of ultraviolet absorption (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the level of ultraviolet in the light diffusive film and the protective layer, through routine experimentation in order to achieve a sufficient level of absorption of ultraviolet light. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Based on the disclosure of Mitsunaga et al. on its own, it would have been obvious to one of ordinary skill in the art create a liquid crystal display panel [0080] comprising a light diffusion layer having the components described in the reference. It is the Examiner's opinion that the composition presented by the applicant does not present a novel idea or unexpected results, but rather serves as an optimization of a prior art.

9. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsunaga et al. (JP 2001-323149) as applied to claim 1 above, and further in view of Hiraishi et al. (WO 2002/099474). For the purposes of this Office Action, an English equivalent of Hiraishi et al., from the same patent family, will be used (US 2003/0156238).

10. The applicant claims the device of claim 1, wherein when the light diffusion sheet has a protective film, the protective film is an organic polymer film containing 0.1 to 50 wt% of ultraviolet absorber (component D^P) and having a thickness of 0.1 to 500 μm, and the content of the ultraviolet absorber (component D) in the composition forming the light diffusion sheet is 0 to 0.5 parts by weight based on 100 parts by weight of the total of the components A and B.

Hiraishi et al. disclose a light-diffusing film having a transparent layer (of thickness 6 to 600 μm [0117]) laminated on at least one side of the light-diffusing layer, wherein the transparent layer is not limited, but may be the same or different resin as the light-diffusing layer, and contains an ultraviolet absorber [0040-0042]. Hiraishi et al. disclose a number of resins available for the light-diffusing layer and transparent layer, including polycarbonate, polyester, and acrylic [0060], and ultraviolet absorbers such as benzotriazoles as benzophenones [0108].

Considering the disclosure of Hiraishi et al., it would have been obvious to one of ordinary skill in the art to laminate a protective layer containing an ultraviolet absorber to the light diffusing film, for the purpose of absorbing ultraviolet light from a light source.

Additionally, absent a showing of criticality with respect to an amount of ultraviolet absorption (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the level of ultraviolet in both the light diffusive film and the protective layer, through routine experimentation in order to achieve a sufficient level of absorption of ultraviolet light. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ohira et al. (JP 2001-31752) disclose a polycarbonate resin composition comprising phosphorus stabilizer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason A. Sese whose telephone number is (571)270-3473. The examiner can normally be reached on Mon-Thurs, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Primary Examiner, Art Unit 4174

Jason A. Sese
Examiner
Art Unit 4174

/J. A. S./